In the claims:

Please cancel claims 1 - 138, and please add claims 139 - 164:

139. A method for treating a patient with a disease, condition or deficiency, comprising (a) first administering to said patient a biocompatible matrix comprising a first encapsulated reaction center, (b) then administering to said patient a first prodrug, wherein said biocompatible matrix comprises a silica-based sol-gel matrix and said first prodrug and said biocompatible matrix treat said disease, condition or deficiency.

140. The method of claim 139, wherein said first reaction center comprises one of the following: an enzyme, an antibody or a catalytic antibody.

141. The method of claim 139, wherein reaction of said first prodrug with said first reaction center produces a biologically active agent.

142. The method of claim 139, wherein administering said biocompatible matrix comprises implantation into said patient.

143. The method of claim 139, wherein said first reaction center is substantially cell-free.

144. The method of claim 139, wherein said biocompatible matrix is immunoisolatory.

145. The method of claim 139, wherein said biocompatible matrix is prepared from at least one type of oxysilane.

146. The method of claim 143, wherein said biocompatible matrix is prepared from at least one type of oxysilane.

147. The method of claim 139, wherein said first prodrug is administered to said patient on at least more than one occasion.

148. The method of claim 139, wherein said first prodrug is administered to said patient on at least more than three occasions.

149. The method of claim 143, wherein said first prodrug is administered to said patient on at least more than one occasion.

150. The method of claim 146, wherein said first prodrug is administered to said patient on at least more than two occasions.

151. The method of claim 139, wherein said biocompatible matrix further comprises a second encapsulated reaction center.

152. The method of claim 143, wherein said first reaction center replaces, augments or supplements an endogenous biological activity.

153. A method for treating a subject suffering from a disease, deficiency or condition, comprising exposing fluids from said subject to a biocompatible, silica-based sol-gel matrix comprising a first reaction center, wherein said first reaction center provides a biological function to treat said disease, deficiency or condition of said subject.

154. The method of claim 153, wherein said biological function is naturally occurring and a deficiency in said biological function is at least in part responsible for said disease, deficiency or condition.

155. The method of claim 153, wherein said first reaction center is substantially cell-free.

156. The method of claim 153, wherein said exposure of said fluids occurs extracorporeal to said subject.

157. The method of claim 155, wherein said exposure of said fluids occurs extracorporeal to said subject.

158. The method of claim 153, wherein said first reaction center reduces the toxicity of a chemical moiety contained in said fluids.

159. The method of claim 155, wherein said first reaction center reduces the toxicity of a chemical moiety contained in said fluids.

160. The method of claim 156, wherein said first reaction center reduces the toxicity of a chemical moiety contained in said fluids.

161. The method of claim 153, wherein said first reaction center is one of the following: cytochrome P-450, hepatocytes or Kupffer cells.

162. The method of claim 153, wherein said fluids are blood of said subject.

A2 cont'd

163. The method of claim 153, wherein said biocompatible matrix further comprises a second reaction center.

164. The method of claim 153, wherein said first reaction center provides enzymatic activity in which said subject is deficient.

REMARKS

Claims 1-138 are pending and have been cancelled. New claims 139 - 164 have been added. Support for the newly added claims may be found throughout the specification and in the claims as originally filed. No new matter has been added.

Cancellation of claims should in no way be construed as an acquiescence or surrender of any originally claimed subject matter, or as narrowing any of the originally filed claims. The cancellation of the original claims and the substitution of the new claims is being made not only to point out with particularity and to claim the present invention, but also to expedite prosecution of the present application. Applicants reserve the option to prosecute further the originally filed claims, or similar ones, in the instant or a subsequent patent application.